

Abstract:

This thesis is about phenomenon of the quasi-biennial oscillation-the alternation of westerly and easterly zonal wind in the equatorial stratosphere with a mean period of 28 months. The structure of the thesis is following. Firstly it describes the general division of the atmosphere with the emphasis on vertical division according to the temperature, which is the most common in meteorology. Furthermore it depicts conditions in the stratosphere; temperature and mean zonal wind flow at the 100 hPa, 10 hPa level and comparison for the summer and winter months. The work introduces important stratospheric phenomena such as polar vortex, sudden stratospheric warming, Brewer-Dobson circulation. The entire third chapter is devoted to the quasi-biennial oscillation. The basic characteristic, the theory of formation and different impacts on the tropical and extratropical region are described. The whole thesis is summerized in the epilogue.